INSECT PEST SURVEY BULLETIN

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THE MORE IMPORTANT RECORDS FOR MARCH, 1934

During the month reports of grasshoppers emerging were received from several places in the Northwest. These refer to the noneconomic species which passed the winter as nymphs. The economic species, so far as our records show, have not yet started to emerge in the Northwest, although they were reported as emerging in large numbers late in the month in the Salt River Valley of Arizona. The winter throughout the Northwest has been especially mild and dry and there is every indication that the grasshoppers have overwintered in large numbers. Severe winds in South Dakota have so badly blown the soil in some areas that eggs are exposed or buried so deep that there is but little chance of their hatching. However, despite these conditions there appear to be plenty of eggs to cause a very serious infestation.

Mormon cricket outbreaks are expected on the Fort Hall Indian Reservation and near Idaho Falls in Idaho, and on the Crow Indian Reservation in Montana. A second infestation in Montana occurs west of the Crow Reservation and extends into the State of Wyoming.

Over much of the territory infested by the Japanese beetle heavy snows in the period of extremely low temperatures during the past winter kept the soil temperature well above the lethal point for this insect and no unusual winter mortality is expected.

Up to the middle of January the chinch bug had suffered only 5 percent mortality in Indiana. By the end of March 3 percent winter mortality was recorded from Missouri, with similar low mortality reported from Kansas, Nebraska, and Iowa. The severe weather that prevailed during the last few days of the month, however, may have a decided effect upon the chinch bug populations in parts of the infested area.

Reports from Indiana and Tennessee indicate that the hessian fly has passed the winter very successfully in that section, having suffered but 4 percent winter mortality, while reports from Kansas indicate that approximately 7 percent died during the winter months.

Examinations made in New Jersey indicate that the corn ear worm was unable to withstand the severe winter temperatures. In Missouri, however, some pupae have been found that passed the winter successfully.

The March cold spell in Missouri, when temperatures reached 14° below zero, resulted in the death of about 30 percent of the codling moth larvae that were above the snow line. Heavy mortality was reported from the New England and Middle Atlantic States. From Kansas to the Pacific Northwest winter mortality has been negligible. In Kansas a few pupae were found during the first part of February and in the Pacific Northwest pupation was well under way during the second and third weeks of March. Reports from Washington and California indicate that along the Pacific Coast codling moth development is some 10 days to 3 weeks earlier than usual. On March 13 a moth was collected in the field in Sacramento County, California, and by the 24th the adults were out in considerable numbers.

The San Jose scale appears to have suffered severe winter mortality in the New England and the Middle Atlantic States. Similar severe winter mortality is reported from Missouri. Observations made in Massachusetts indicate that -30° F. resulted in killing 89 percent, -22° F. in killing 75 percent, and -18° F. in killing 70 percent of the scales above the snow line.

The first plum curculio collected this season at Fort Valley, Ga., was found on March 21, indicating the probability of two broods in this section.

Grape leafhopper populations are very heavy in the San Joaquin and Imperial Valleys of California, and present indications are that infestations will be severe.

A small infestation of the vegetable weevil was found in Sacramento County, Calif., this spring. This is said to be the first positive record for this insect in the Sacramento Valley.

The Mexican bean beetle suffered heavy mortality in open fields in New Jersey. This does not, however, preclude the possibility that this insect successfully wintered over in the wooded areas. Adults that had successfully passed the winter were collected late in March in West Virginia.

The harlequin bug suffered complete mortality in open fields in New Jersey. No reports on this insect from other northern States have been received.

The cotton leaf worm produced successive generations throughout the winter in Haiti, the last two pupal periods coming the latter part of January and the latter part of February. Observations that will be made in Florida on the first appearance of the moths this year may possibly be associated with the observations being made in Port-au-Prince.

Possibly owing to the very mild winter in the West, the fall and spring canker worms produced adults during the early part of January. The infestation in Kansas is the heaviest in many years.

The European pine shoot moth suffered heavy winter mortality, as high as 99 percent mortality having been recorded from points in Massachusetts and 80 to 90 percent in Connecticut.

G E N E R A L F E E D E R S

GRASSHOPPERS (Acrididae)

North Dakota. J. A. Munro (March 19): Numerous specimens of noneconomic forms of grasshoppers have been received from farmers in western counties during the past winter. Conditions to date appear to have been ideal for the overwintering eggs of the economic species.

South Dakota. H. C. Severin (March): In South Dakota we have had much wind and blowing of soil. In some areas the soil has blown to such an extent as to expose many grasshopper eggs, which have dried out and died. Along fences the soil has sometimes accumulated and buried the eggs from a few inches to 2 feet or more. However, there are plenty of eggs that are passing the winter successfully. The winter has been exceptionally mild and dry.

Iowa. H. E. Jaques (March 24): Some nymphs are showing up. (These are probably noneconomic species. J. A. H.)

Nebraska. M. H. Swenk (March 19): Grasshoppers are moderately to very abundant in northeastern, northern, and western Nebraska. From Chase County comes the report that in the Frenchman Valley grasshoppers have lived over the winter, and that during the second week in March they were eating around the edges of the wheat for a depth up to 25 feet. This probably refers to Chortophaga viridifasciata DeG., the green-striped grasshopper, or to species of Arphia or Pardalophora.

Arizona. C. D. Lebert (March 9): Young grasshoppers were reported as being very numerous on 80 acres of alfalfa east of Gilbert, a short crop of alfalfa having been badly riddled. (March 21): Melanoplus mexicanus Sauss. are hatching by the thousands on ditch banks and fence rows in the Mesa-Chandler area. They are confined almost entirely to Bermuda grass along fence rows and ditch banks at present. Control measures are being practiced in this area.

Wyoming. C. L. Corkins (March 20): Grasshoppers have wintered normally and are very abundant.

Utah. G. F. Knowlton (March 21): No grasshoppers have been observed as yet.

MORMON CRICKET (Anabrus simplex Hald.)

United States. Division of Cereal and Forage Insects (March 2): In Idaho, an outbreak of this pest has been in progress on the Fort Hall Indian Reservation at Blackfoot for the past two years. The Bureau of Entomology, the Idaho State authorities, and the Indian Service have succeeded thus far in keeping this outbreak under control but it again threatens to be a serious problem in the spring of 1934. Another outbreak is forming near Idaho Falls and St. Anthony, Idaho. In Montana a serious condition due to this insect pest has appeared on the Crow Indian Reservation near the Pryor Mountains where the insects are beginning to invade privately owned lands. A survey made by State authorities in the summer of 1933 showed that 120,000 acres of land on the Crow Reservation was infested with the

Mormon cricket and that about 15 square miles was infested in the Dryhead area west of the reservation near the Wyoming boundary. The insect is reported to be present in large numbers in the latter State in territory contiguous with the infestation in Montana previously mentioned.

ARMY CUTWORM (Chorizagrotis auxiliaris Grote)

Kansas. H. R. Bryson (March 20): The army cutworm is moderately abundant in wheat and alfalfa fields. At Manhattan the larvae are more plentiful in the old alfalfa fields than in new fields. Some damage to wheat has been reported from Winfield, Cowley County, and in the vicinity of Hutchinson, Reno County.

Wyoming. C. L. Corkins (March 20): C. auxiliaris is moderately abundant but not active in Hot Springs County.

ALFALFA WEBWORM (Loxostege commixtalis Walk.)

Kansas. H. R. Bryson (March 20): Many overwintering larvae in tubes were sent in from Hoxie. Overwintering tubes were said to be very numerous in fields where pigweeds were present. There have been heavy flights of moths during the last few years.

WIREWORMS (Elateridae)

New Jersey. R. C. Burdette (March): A few wireworms are appearing in plant beds in northern New Jersey.

Indiana. J. J. Davis (March 27): Wireworms are reported as abundant in some muck fields of northern Indiana.

Texas. F. L. Thomas (March 20): Wireworms are very abundant at Nixon, Gonzales County. A correspondent states that he has planted corn the third time and that wireworms have destroyed practically all plantings.

California. E. O. Essig (March 22): Wireworms are moderately abundant in the Delta Region.
A. E. Michelbacher (March 21): Limonius canus Lec. was moderately abundant at Courtland, Sacramento County.
M. L. Jones (March 16): Tulare County reports wireworms as causing slight damage to 50 acres of truck crops and melons generally during February.
F. H. Wymore (March 21): Wireworms are moderately abundant at Davis, Yolo County, attacking tomato plants in cold-frame beds.

JAPANESE BEETLE (Popillia japonica Newm.)

New Jersey. Japanese Beetle Laboratory (Bur. Ent.) (March 2): Although the air temperature for the month in New Jersey reached as low as -13° F., the soil temperatures recorded at the Moorestown laboratory did not go below 22° F. The larvae of the Japanese beetle does not withstand temperatures much below 15° F. This cold wave has been accompanied by snow, which has so protected the ground that the temperatures apparently have not reached a point where they would kill many larvae.

KOO-TSABE (Ephydra hians Say)

Nevada. G. G. Schweis (February 23): Winnemucca Lake is a body of water approximately 25 miles long and from 6 to 10 miles wide. It formerly was a fresh water lake but of late years the streams that fed it have been diverted for irrigation purposes and the lake is now very saline. Fish formerly abounded there in great numbers but the lake is now devoid of all fish life so far as I know. Great quantities of seaweed abound in this lake and this weed is apparently the breeding place for the insects we are sending you. These flies are so numerous that during the warm part of the day, as they fly along the shore, you would think a snowstorm was in progress if the flies were not black. As soon as the sun dips behind the horizon the insects all fly in a certain direction and by nightfall they are clustered in great heaps in depressions or under bushes, where they apparently seek some protection from the chill night air. The larval form apparently is of some value as duck food, as ducks that I have killed there have had their gullets practically filled with small maggots. Ducks occur there in great numbers. (Det. J. M. Aldrich.)

COMMON RED SPIDER (Tetranychus telarius L.)

Virginia. H. G. Walker (March 26): Examination of strawberry fields in Princess Anne County have shown that some of the fields are infested.

North Carolina. W. A. Thomas, Monthly Letter, Bur. Ent. No. 237 (February): "On January 30 the temperature at Chadbourn dropped from normal spring weather levels to 8° F. with a maximum temperature during the day of 26° F., followed by another drop on the morning of January 31 to 5½° F., which apparently is a low record for the section. Following this low temperature, strawberry leaves infested by the red spider were collected and brought to the laboratory for examination. These examinations revealed that practically all adults and nymphs had been killed, but the eggs were apparently not affected. These were hatching freely within 3 days. The red spider has been particularly abundant on strawberries during the past year (1933). This condition has been greatly aggravated by the long-continued drought which lowered the vitality of the plants."

Mississippi. C. Lyle and assistants (March): Red spiders were found to be moderately abundant on azalea leaves at Pecan, Jackson County, on March 5. They are generally distributed in strawberry fields in Lauderdale and Jackson Counties.

Texas. F. L. Thomas (March 15): The red spider is abundant on strawberry plants in Galveston County, according to J. N. Roney. About 50 percent of the plantings are infested and control measures are being practiced.

California. M. L. Jones (March 16): Santa Clara County reported the red spider as causing slight damage on violets and sweet peas during January and February.

C E R E A L A N D F O R A G E - C R O P I N S E C T S

WHEAT AND OTHER SMALL GRAINS

CHINCH BUG (Blissus leucopterus Say)

Indiana. P. Luginbill and W. B. Noble, Monthly Letter Bur. Ent., No. 237 (February): Hibernating chinch bugs evidently suffered very little mortality in the vicinity of Lafayette up to January 19. Of 465 bugs in bunches of corn husks taken from the field on that date, only 5 percent were dead. Up to that time the weather was very mild, the lowest temperature recorded at Lafayette having been -29° F., with very little snow and precipitation considerably below normal.

Illinois. W. P. Flint (March 20): Chinch bugs show only about a 3 percent winter mortality in recent counts at Urbana. It is estimated that there are at least five times as many bugs in hibernation as there were a year ago on the same date.

Iowa. C. J. Drake (March 26): Winter mortality has been extremely low; in counts we found that considerably less than 1 percent of the bugs perished during the winter months.

Missouri. L. Haseman (March 21): The chinch bug situation continues serious. Late February burning in some cases gave 50 percent kill but since burning severe weather has killed over 15 percent in burned as well as unburned clumps.

Nebraska. M. H. Swenk (March 19): The chinch bug is very abundant in southeastern Nebraska.

Kansas. H. R. Bryson (March 20): Chinch bugs were more numerous in hibernation this winter at Manhattan than they have been for five or six years. This is generally true for central and southeastern Kansas. Owing to the mild, dry winter very little mortality resulted this year. Adults were taken on Kentucky bluegrass plots, March 15.

HESSIAN FLY (Phytophaga destructor Say)

Indiana and Tennessee. Monthly Letter Bur. Ent., No. 237 (February): Practically all the hessian fly were in puparia and dormant at Lafayette, Ind., in January. At Fayetteville, Tenn., however, the mild weather and ample rainfall during January actually caused a little pupation. Curtis Benton found 2 live pupae in 100 puparia dissected on January 26. His dissections of puparia late in January showed about 4 percent mortality.

Nebraska. M. H. Swenk (March 19): Hessian flies are moderately abundant in south-central and southeastern Nebraska.

Kansas. H. R. Bryson (March 23): Hessian flies are scarce at Manhattan and normal in abundance in the central part of the State. A report from Havana, Montgomery County, indicates that the fly is moderately abundant in the southeastern part of the State.
J. R. Horton, Monthly Letter Bur. Ent., No. 237 (February): Dissections

of over 300 puparia of the fall generation during December and January indicate that approximately 93 percent of the larvae are viable and that over 55 percent have reversed their position in the puparia.

A CRANE FLY (Tipulidae)

California. A. E. Michelbacher (March 21): On the 28th of February serious injury to a grain planting by tipulid larvae was observed near Niles. The stand was destroyed over a rather extensive area.

TOBACCO THRIPS (Frankliniella fusca Hinds)

Florida. J. R. Watson (March 20): Moderately abundant on rye during the latter part of February and March.

CORN

CORN EAR WORM (Heliothis obsoleta Fab.)

New Jersey. T. J. Headlee, R. C. Burdette, and B. F. Driggers (March): Diggings made for pupae in southern New Jersey showed all of them to be killed by the cold weather.

Florida. J. R. Watson (March 20): The corn ear worm is scarce.

Missouri. L. Haseman (March 21): Recent diggings show that some pupae have survived the winter.

Texas. F. L. Thomas (March 20): The first eggs were found by Dr. R. K. Fletcher in alfalfa in Burleson County today.

ALFALFA

ALFALFA WEEVIL (Hypera postica Gyll.)

California. E. O. Essig (March 22): Alfalfa weevils are moderately abundant throughout infested areas.

A. E. Michelbacher (March 21): The alfalfa weevil situation is as follows: In the Tracy area the weevil can be found in all fields. On March 20 the highest population was encountered at Vernalis. There an average of 1,198 larvae were collected to the 100 sweeps. In the field examined some damage was noticeable, although not of a serious nature. In all other fields examined the average number of larvae taken per 100 sweeps ranged from 2 to 200, in which fields no damage is apparent. In the Pleasanton district average larval counts of from 67 to 516 were taken on March 15. Up to that time no injury was apparent, and every indication was that the alfalfa for the most part would reach maturity before much injury occurred. It is the young vigorously growing fields in which the larval counts remain very low. In the country about Niles the highest larval counts have been taken. In one field an average count of 2,020 was taken to the 100 sweeps on March 14, and in other fields on the same date average counts of as high as 575 were taken. One field was swept today and an average count of 754 larvae was collected. The average taken from this field on the 14th was 552. In this district some injury is noticeable, but this is not true of all fields.

PEA APHID (Illinoia pisi Kalt.)

Kansas. H. R. Bryson (March 20): Pea aphids are more plentiful than usual. They are more abundant on fall-sown alfalfa than on the old stands. Winged forms were found in the fields as early as February 15. They are reproducing rapidly at present and if the cold, dry weather continues, an outbreak is likely to occur. Unlike other years, the infestations do not occur in spots, but they are generally distributed over the entire field.

California. A. E. Michelbacher (March 21): The pea aphis on alfalfa is not so serious this year as it was last.

SUGARCANE

SUGARCANE BORER (Diatraea saccharalis Fab.)

Louisiana. W. E. Hinds (March 26): Winter mortality of the sugarcane borer appears to be unusually low. Possibly this is due to the fact that the winter has been unusually cool through February and March, with less fluctuation between maximun and minimum. Minimum temperatures have not gone below 25° F in the real cane belt. Pupation of hibernating larvae often occurs during February, but this year the first pupae were found during the last week of March at LaPlace.

F R U I T I N S E C T S

APPLE

CODLING MOTH (Carpocapsa pomonella L.)

Vermont. H. L. Bailey (March 28): The codling moth is moderately abundant; some larvae have been reported dead from winter killing.

Massachusetts. A. I. Bourne (March 28): From such observations as it has been possible to make at Amherst we anticipate a considerable mortality of the codling moth.

New York. P. J. Parrott (March): Many hibernating larvae have been killed by low temperatures in some sections of western New York.

New Jersey. T. J. Headlee, R. C. Burdette, and B. F. Driggers (March): The codling moth is moderately abundant.

Delaware. L. A. Stearns (March 23): There has been a 40-50 percent mortality of overwintering larvae. No pupation yet.

Georgia. C. H. Alden (March 19): There has been no pupation noted at Cornelia.

Missouri. L. Haseman (March 21): At Columbia the recent -14° F. temperature has apparently killed about 30 percent of larvae exposed above the snow line.

Kansas. H. R. Bryson (March 20): The codling moth wintered over in greater numbers than it has been known to do previously in northeatern Kansas. The

mortality during the winter has been negligible. Overwintering larvae are abundant over the State. Some pupae were taken at Manhattan the first part of February.

Idaho. R. W. Haegele (March 20): Codling moths are very abundant in southwestern Idaho. Larvae were pupating in abundance during the week of March 12 - 19.

Washington. E. J. Newcomer (March 14): The season is the earliest recorded in the last 20 years for the codling moth, being a week or 10 days earlier than the very early season of 1926. The winter has been extremely mild, the lowest temperature recorded having been 21° F. on November 29. This, together with a very large worm population in neglected orchards, is going to make control very difficult this year. The calyx spray will probably start about April 10, a month earlier than in 1933.

California. S. Lockwood (March 24): On March 13 an adult was found in a pear orchard in Sacramento County. This is the earliest date that adults have been caught that I know of. Reports from other areas indicate that the moth is out in considerable numbers. This is about two to three weeks earlier than usual.

EASTERN TENT CATERPILLAR (Malacosoma americana Fab.)

Vermont. H. L. Bailey (March 28): The eastern tent caterpillar is moderately abundant. Winter killing is apparent in egg masses collected at Montpelier.

Massachusetts. A. I. Bourne (March 28): At Amherst eggs from orchards where temperatures ranged from -20 to -30° F. are hatching apparently normally.

Connecticut. W. E. Britton (March 23): Egg clusters on twigs are moderately abundant.

West Virginia. L. M. Peairs (March 24): Egg masses are numerous at Morgantown.

Arkansas. W. J. Baerg. (March 21): Young caterpillars began emerging from eggshells on March 20 at Fayetteville. On the 21st about 80 percent had emerged. Egg masses are very abundant this year.

FRUIT TREE LEAF ROLLER (Cacoecia argyrospila Walk.)

California. E. O. Essig (March 22): Fruit tree leaf rollers are moderately abundant; they are just appearing in middle California.
M. L. Jones (March 21): Fruit tree leaf rollers are moderately abundant working in the base of young apricot fruits at Vacaville, Solano County.
F. H. Wymore (March 21): Fruit tree leaf rollers are moderately abundant in Solano and Sonoma Counties. Although common in many orchards, little damage has resulted from their feeding.

APHIDS (Aphiidae)

Vermont. H. L. Bailey (March 28): Fruit aphids, (Aphis pomi DeG.) are scarce.

Massachusetts. A. I. Bourne (March 28): No actual counts have been made on plant lice at Amherst but we have found a slight amount of hatching and

a very large percentage of shriveled eggs. This is also confirmed by reports which we have received from Connecticut.

Connecticut. W. E. Britton (March 23): Fruit aphid eggs are scarce on twigs.

New York. P. J. Parrott (March): Grain aphid (Rhopalosiphum prunifoliae Fitch) and green aphid (A. pomi) eggs survived the winter fairly well and are moderately abundant.

New Jersey. T. J. Headlee, R. C. Burdette, and D. F. Driggers (March): Apple aphids (A. pomi) are moderately abundant.

Delaware. L. A. Stearns (March 23): Fruit aphid eggs are moderately abundant over the State.

West Virginia. L. M. Peairs (March 24): Fruit aphid eggs are moderately abundant at Morgantown.

Georgia. C. H. Alden (March 19): Fruit aphid eggs are moderately abundant on trees at Cornelia.

Missouri. L. Haseman (March 21): Aphid eggs are less abundant than usual.

Mississippi. J. P. Kislanko (March 20): A. pomi is scarce at Hattiesburg. Stem mothers were observed on quince.

Oregon. D. C. Mote (March 24): Fruit aphids are out in great numbers - more numerous than normally in the Willamette Valley.

California. E. O. Essig (March 22): The green apple aphid, A. pomi, was present in apterous form all winter on Cotoneaster in the San Francisco Bay region. It is now abundant in many places.

APPLE LEAFHOPPERS (Cicadellidae)

New York. P. J. Parrott (March): Apple leafhopper eggs on wood brought into the greenhouse are hatching.

Kansas. H. R. Bryson (March 20): A red and white leafhopper, Erythroneura sp., hibernated in large numbers in apple orchards at Troy.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Vermont. H. L. Bailey (March 28): There were very few living insects on bark received from a survey in the vicinity of Brattleboro, Windham County. The scale is found in only two or three localities in Vermont including the one mentioned.

Massachusetts. A. I. Bourne (March 28): Professor Whitcomb of Waltham made extensive counts on San Jose scale from orchards which had been subjected to varying degrees of temperature, with the following results: Orchards with minimum recorded temperature of -30° F., 89.3 percent of the scale was dead; -22° F., 75 percent dead; and -18° F., 70.1 percent dead.

Connecticut. W. E. Britton (March 23): The San Jose scale is scarce; there has been heavy winter mortality.

New York. P. J. Parrott (March): From 90 to 99 percent were killed by winter. R. E. Horsey (March 25): The San Jose scale has not been very common at Rochester and has been easily controlled. It is not considered a serious pest with us.

South Carolina. W. C. Nettles (March 19): The San Jose scale is moderately abundant and giving trouble in Oconee County.

Georgia. O. I. Snapp (March 17): Low temperatures during the winter have not killed many San Jose scales at Fort Valley. The average percentage of live scales on certain peach trees on February 17 was 82.2 and the average percentage alive on these trees on March 17 was 70.5.

Florida. J. R. Watson (March 20): The San Jose scale is moderately abundant.

Illinois. W. P. Flint (March 20): A survey during the fall of 1933 indicated that in peach and apple orchards moderate to severe infestations had increased from 6 percent in 1932 to 27 percent for 1933. Spring counts March 19 show 15 to 50 percent of the scale alive.

Iowa. H. E. Jaques (March 24): The San Jose scale is moderately abundant in southeastern Iowa.

Missouri. L. Haseman (March 21): Recent counts on pear at Columbia show only 1.5 percent survival of the San Jose scale, with apparently considerable parasitization.

Mississippi. C. Lyle (March 22): The San Jose scale has been reported from moderately to very abundant generally. Slight infestations were observed on spirea and honeysuckle at Greenwood in Leflore County and West in Holmes County during the past few weeks. Complaints of the occurrence of this species on these two plants are rarely received.

Texas. F. L. Thomas (March 20): The San Jose scale was very abundant at Ft. Davis, Jeff Davis County, on March 10, on a few apple trees that had not been properly sprayed.

California. M. L. Jones (March 16): Merced County reports the San Jose scale as causing medium damage to deciduous trees generally, and Tulare County reports the scale as moderately abundant on 5,000 acres of deciduous and citrus trees in February.

ROUND-HEADED APPLE TREE BORER (*Saperda candida* Fab.)

South Carolina. W. C. Nettles (March 19): A severe infestation of the round-headed apple borer was observed in an apple orchard in Pickens County.

FRUIT TREE LEAF BEETLE (Syneta albida Lec.)

Oregon. B. G. Thompson and S. C. Jones.(March 24): The Syneta beetle is beginning to appear in apple orchards at Monroe. The first larvae were found in a prune orchard near Forest Grove on March 14.

WESTERN APPLE CURCULIO (Tachypterellus quadrigibbus magnus List)

Kansas. H. R. Bryson (March 20): The apple curculio built up its population last summer and there have been no losses in hibernation.

EUROPEAN RED MITE (Paratetranychus pilosus C. & F.)

Massachusetts. A. I. Bourne (March 28): Eggs from orchards in Amherst where the temperatures ranged from -25 to -30° F. apparently were unaffected.

Connecticut. W. E. Britton (March 23): A majority of the eggs have survived the winter.

California. M. L. Jones (March 16): Santa Clara County reported the European red mite as causing moderate damage on 25,000 acres of prunes and cherries during February.

PEACH

ORIENTAL FRUIT MOTH (Grapholitha molesta Busck)

New York. P. J. Parrott (March): There has been about 75 percent mortality in most sections of western New York.

New Jersey. T. J. Headlee, R. C. Burdette, and B. F. Driggers (March): The oriental fruit moth is scarce.

Delaware. L. A. Stearns (March 23): No pupation of the oriental fruit moth, 40-50 percent mortality, March 15.

Georgia. C. H. Alden (March 19): No pupation noted to date at Cornelia.

Indiana. J. J. Davis (March 27): In most sections of the State peach buds have been completely killed and this probably will have a tendency to check the late brood.

Mississippi. C. Lyle (March 22): Peach twigs showing injury by larvae were received during the month from Quitman, Jackson, Humphreys and Attala Counties.

PEACH BORER (Aegeria exitiosa Say)

Alabama. J. M. Robinson (March 20): The peach borer is moderately abundant at Auburn.

Georgia. O. I. Snapp (March 21): Pupation of the spring brood has started at Fort Valley. As usual, the infestation is heavy in neglected orchards and those in which there are trees with injured areas.

Mississippi. C. Lyle (March 22): The peach borer is reported as very abundant in parts of the State.

Idaho. R. W. Haegele (March 20): The peach tree borer is damaging peaches in some orchards in Upper Payette Valley. (May be A. opalescens Edw. JAH)

PLUM CURCULIO (Conotrachelus nenuphar Hbst.)

Georgia. O. I. Snapp (March 21): The first curculio of the season was caught at Fort Valley today by jarring peach trees that had begun to bloom. As usual the insect is appearing from hibernation at the time of the appearance of the first open peach blossoms, and as a result two broods of larvae are likely to occur. Emergence from hibernation is expected to be heavy during the next two weeks provided weather conditions are favorable.
C. H. Alden (March 19): The plum curculio is hibernating; no beetles are out to date at Cornelia.

SHOT-HOLE BORER (Scolytus rugulosus Ratz.)

Indiana. J. J. Davis (March 27): There has been a gradual increase apparently in some sections of the State, and with the severe winter which has weakened the stone fruit trees I anticipate a heavy outbreak of borers this spring and summer.

Mississippi. J. Milton (March 19): A heavy infestation was noticed on a peach tree in Rankin County near Florence on March 14. This tree had been weakened by the San Jose scale.

Idaho. R. W. Haegele (March 20): The shot-hole borer is present in prune trees, weakened by the peach tree borer, in the Upper Payette Valley.

SALMON FLY (Taeniopteryx pacifica Bks.)

Idaho. R. W. Haegele (March 21): The salmon fly was found seriously injuring peach orchards in the Payette Valley. Blossom buds and blossoms were attacked, practically all blossoms being destroyed on some trees.

GREEN PEACH APHID (Myzus persicae Sulz.)

Colorado. G. M. List (March 29): The green peach aphid promises to be somewhat more abundant in Mesa and Delta Counties than it has been for a number of years. Eggs began hatching the latter part of February and early in March.

CHERRY

PUTNAM'S SCALE (Aspidiotus ancylus Putn.)

Nebraska. M. H. Swenk (March 15): During the first week in March a Dodge County correspondent sent in specimens of bark of a cherry tree showing a heavy infestation and injury.

PLUM

PEAR THRIPS (Taeniothrips inconsequens Uzel.)

Oregon. S. C. Jones (March 24): Prune thrips began emerging during the last week in February. The peak of emergence was reached on March 12, when prune buds were in the white tip stage in the earlier sections, and late green tip stage of development in the later sections of the Willamette Valley. Eggs were observed on March 12 near Corvallis. First-instar larvae were found in prune orchard near Roseburg on March 21 and in an orchard near Forest Grove on March 22.

California. F. H. Wymore (March 21): Pear thrips are moderately abundant in prune and plum orchards in the coastal areas of Santa Clara, Napa, Solano, and Sonoma Counties. Emergence of adults began on January 30 and continued until the present, the peak being reached about March 4. The first nymphs were observed on March 8.
S. Lockwood (March 27): During the week of March 18-24, larvae were reported as very prevalent on pears and plums in orchards along the Sacramento River south of Sacramento.

DESTRUCTIVE PRUNE WORM (Mineola scitulella Hulst)

Idaho. R. W. Haegele (March 20): Overwintering larvae started to emerge during the first week in March. Infestations on prune are light to heavy.

RASPBERRY AND BLACKBERRY

ROSE SCALE (Aulacaspis rosae Bouche)

Ohio. E. W. Mendenhall (March 26): The rose scale is abundant in some raspberry and blackberry plantings in Fairfield County.

California. M. L. Jones (March 16): Kern County reports the rose scale as having caused slight damage locally to roses and blackberries during February.

GRAPE

GRAPE LEAFHOPPER (Erythroneura comes Say)

Nebraska. M. H. Swenk (March 15): A Kearney County correspondent, during the first week in March, reported the finding of many hibernating specimens of the grape leafhopper while cleaning out the dead leaves from among a lilac hedge near where this pest had defoliated his woodbine last summer.

Arizona. C. D. Lebert (March 12): These leafhoppers are very numerous on about 5 acres of blackberries adjacent to vineyards in Phoenix where they were destructive last season.

California. S. Lockwood (March 24): The grape leafhopper is now found in great numbers in the San Joaquin and Imperial Valleys. Indications are that infestations will be severe and the losses tremendous unless methods of fighting this insect are more effective than they have been heretofore.

CITRUS

PURPLE SCALE (Lepidosaphes beckii Newm.)

Florida. J. R. Watson (March 20): The purple scale is moderately abundant generally.

Mississippi. H. Gladney (March 16): The purple scale is moderately abundant on citrus at Ocean Springs.

California. M. L. Jones (March 16): Santa Barbara County reported the purple scale as abundant on citrus locally during February.

COTTONY-CUSHION SCALE (Icerya purchasi Mask.)

Florida. E. W. Berger and G. B. Merrill (March 20): The cottony cushion scale is moderately abundant here and there over most of the State. The principal hosts are citrus and pittosporum. Rodolia cardinalis Muls. is being supplied by the Entomological Department of the State Plant Board.

Mississippi. J. P. Kislanko (March 20): The cottony-cushion scale is quite abundant on pecans and pittosporum, killing some pittosporum shrubs at Hattiesburg. R. cardinalis is multiplying rapidly and a check on further injury by the scale is anticipated.

California. M. L. Jones (March 16): Tulare and Kern Counties report the cottony-cushion scale as moderately abundant locally on citrus and ornamentals, for February.

GREEN CITRUS APHID (Aphis spiraecola Patch)

Florida. J. R. Watson (March 20): Unusually scarce. The winter has been too dry for growth on young trees.

COWPEA APHID (Aphis medicaginis Koch)

Arizona. C. D. Lebert (March 21): The bur clover aphis is moderately abundant on citrus and ivy at Phoenix.

CITRUS RUST MITE (Phyllocoptes oleivorus Ashm.)

Florida. J. R. Watson (March 20): Owing to recent rain the rust mite is not so abundant as in January, but still unusually abundant for March.

Texas. F. L. Thomas (March 20): S. W. Clark reported on February 10 that P. oleivorus was extremely abundant on citrus owing to the mild winter. Control measures were being practiced. The citrus rust mite is moderately abundant in Hidalgo County.

CITRUS RED SPIDER (Paratetranychus citri McG.)

California. M. L. Jones (March 16): Santa Barbara County reported the citrus red spider as having caused severe damage on 28 acres of citrus locally during February.

GUAVA

CARDIN'S WHITEFLY (Aleurodicus cardini Back)

Florida. E. W. Berger & G. B. Merrill (March 20): The Cardin's whitefly is moderately abundant, and generally present where guavas grow.

PYRIFORM SCALE (Protopulvinaria pyriformis Ckll.)

Florida. E. W. Berger & G. B. Merrill (March 20): The pyriform scale is generally present where avocados and guavas are growing. It also occurs on Cape Jasmine and English ivy in northern Florida.

TRUCK-CROP INSECTS

VEGETABLE WEEVIL (Listroderes obliquus Gyll.)

Alabama. J. M. Robinson (March 20): Vegetable weevils are moderately abundant at Auburn. Adults have been emerging for three weeks and the larvae have been abundant since December on turnips, lettuce, and other tender vegetables.

Mississippi. C. Lyle (March 22): A correspondent at Phoenix, Yazoo County, reported on February 22 that larvae had severely injured turnips in his garden. Complaints of damage to various garden crops have also been received from other sections of the State.

California. M. L. Jones (March 21): A small infestation has been found in Sacramento County about 4 miles south of Sacramento on the east side of the Sacramento River. The infestation is confined to 5 acres of turnips and spinach and is the first positive record of this insect in the Great Valley.

SPOTTED CUCUMBER BEETLE (Diabrotica duodecimpunctata Fab.)

Florida. J. R. Watson (March 20): The spotted cucumber beetle is very abundant on corn.

Alabama. J. M. Robinson (March 20): The spotted cucumber beetle is moderately abundant at Auburn on winter legumes.

Texas. F. L. Thomas (March 20): The spotted cucumber beetle was moderately abundant at Dickinson, Galveston County, on March 5. J. N. Roney took 46 of these insects in 100 sweeps of a net. The beetles were feeding on spinach.

WESTERN STRIPED CUCUMBER BEETLE (Diabrotica trivittata Mann.)

California. F. H. Wymore (March 21): The striped cucumber beetle has been quite active during the past three weeks in the vicinity of Davis and some feeding is apparent on volunteer cucurbits.

WESTERN SPOTTED CUCUMBER BEETLE (Diabrotica soror Lec.)

Oregon. B. G. Thompson (March 24): D. soror is laying eggs in bean fields near Harrisburg.

California. F. H. Wymore (March 21): The spotted cucumber beetles have been quite active about the gardens in this section of the State for the past month. Injury to winter spinach in the San Jose area was quite apparent.

SEED CORN MAGGOT (Hylemyia cilicrura Rond.)

Virginia. H. G. Walker (March 26): The seed corn maggot adults are moderately abundant at Norfolk.

California. F. H. Wymore (March 21): The seed corn maggot is doing considerable damage to young tomato plants in the cold frames about Davis. As high as 25 percent of the plants have been destroyed in some of the beds. Cucurbits were rather severely damaged in the Coachella and Imperial Valleys the latter part of February and the first part of March.

SOUTHERN GREEN STINK BUG (Nezara viridula L.)

Florida. J. R. Watson (March 20): The Southern green stink bug emerged from hibernation in large numbers during the first week in March.

FALSE CHINCH BUG (Nysius ericae Schill.)

Texas. F. L. Thomas (March 20): S. W. Clark reports that N. ericae has caused severe damage in one turnip field, and that it was also abundant on cabbage but causing no noticeable damage.

A SPITTLE BUG (Aphrophora permutata Uhl.)

Oregon. D. C. Mote (March 24): W. D. Edwards reports that spittle bugs were first seen on March 7 and are still hatching.

NORTHERN MOLE CRICKET (Gryllotalpa hexadactyla Perty)

Nebraska. M. H. Swenk (February 15 - March 15): A correspondent at Leigh, Colfax County, on February 23, sent in a specimen of the common mole cricket which he had found, along with a number of others, at a depth of about 6 feet in the ground.

BEANS

MEXICAN BEAN BEETLE (Epilachna corrupta Muls.)

New Jersey. T. J. Headlee, R. C. Burdette, B. F. Driggers (March): The Mexican bean beetle has suffered heavy mortality in the bean fields where hibernating under bean leaves, crab grass, and trash. No check has been made in wooded areas.

West Virginia. L. M. Peairs (March 24): The Mexican bean beetle has been reported at Morgantown and several hibernating adults have been collected, all alive.

Ohio. N. F. Howard (March 27): At present the survival is lower than last year but is still relatively high and considerably higher than the general average for the Ohio Valley region.

BANDED CUCUMBER BEETLE (Diabrotica balteata Lec.)

Florida. J. R. Watson (March 20): D. balteata are very abundant on beans in Dade County.

CABBAGE

IMPORTED CABBAGE WORM (Ascia rapae L.)

Virginia. H. G. Walker (March 26): A report of a cabbage butterfly flying around March 26, was received.

South Carolina. F. Sherman (March 19): The cabbage butterfly was observed in flight at Clemson College, March 18; first seen in 1934.

Louisiana. W. E. Hinds (March 26): Eggs have been unusually scarce during March. The adults have been rather scarce and rains seem to have washed off many of their eggs.

Missouri. L. Haseman (March 21): I have not seen any butterflies on the wing this month at Columbia.

DIAMOND-BACK MOTH (Plutella maculipennis Curt.)

Virginia. H. G. Walker (March 26): There are a few moths present in kale fields at Norfolk, but a hymenopterous parasite is also present which will tend to keep them under control.

CABBAGE LOOPER (Autographa brassicae Riley)

Texas. F. L. Thomas (March 20): S. W. Clark reports that A. brassicae is becoming abundant on late cabbage at Weslaco.

CABBAGE APHID (Brevicoryne brassicae L.)

Mississippi. G. L. Bond (March 17): The cabbage aphids are moderately abundant at Pecan, Jackson County. Cabbages are found to be turning yellow due to aphids on their roots; the aphids are not very numerous on the tops.
J. Milton (March 19): On March 17th a heavy infestation of plant lice was observed on a few cabbage plants in a 2-acre field near Magee, Simpson County. The infested plants were seriously injured.

HARLEQUIN BUG (Murgantia histrionica Hahn)

New Jersey. T. J. Headlee, R. C. Burdette, B. F. Driggers (March): The harlequin cabbage bug suffered heavy mortality; all that remained in fields were killed off.

Mississippi. N. D. Peets (March 19): The harlequin bug is moderately abundant in southwestern Mississippi.

Louisiana. W. E. Hinds (March 26): The harlequin cabbage bugs, in all stages, have been very abundant on Chinese cabbage at Baton Rouge.

SQUASH

SQUASH BUG (Anasa tristis DeG.)

California. F. H. Wymore (March 21): Squash bugs have been rather active around Davis, Yolo County, for the past two weeks.

STRIPED CUCUMBER BEETLE (Diabrotica vittata Fab.)

Florida. J. R. Watson (March 20): The striped cucumber beetle is very abundant on squash in Dade County.

TURNIP

TURNIP APHID (Rhopalosiphum pseudobrassicae Davis)

South Carolina. W. C. Nettles (March 19): The false cabbage aphid is present in numbers in the eastern trucking district, near Charleston.

Mississippi. H. Gladney (March 16): Turnip aphids are moderately abundant at Ocean Springs, Jackson County.

ONIONS

ONION THRIPS (Thrips tabaci Lind.)

Florida. J. R. Watson (March 20): During the first part of March the onion thrips appeared in considerable numbers about Gainesville for the first time this winter.

Texas. F. L. Thomas (March 12): T. tabaci are abundant on cabbage at Weslaco.

SWEETPOTATO

AN EAR WIG (Forficulidae)

Mississippi. G. L. Bond (March 17): Earwigs have been found feeding on sweetpotatoes where they were banked in the field or in sheds. This is quite common in all sections of Jackson County east of the Pascagoula River.

STRAWBERRY

STRAWBERRY LEAF ROLLER (Ancylis comptana Froel.)

Kansas. H. R. Bryson (March 16): The strawberry leaf roller is reported as very abundant in hibernation at Troy.

Oregon. W. D. Edwards. (March 24): Found larva in strawberry leaf near Corvallis.

A TORTRICID (Ablabia longana Haw.)

Oregon. D. C. Mote (March 24): Overwintering larvae of Cnephasia longana are emerging from winter quarters and beginning to feed.

A ROOT WEEVIL (Dyslobus sp.)

Oregon. K. W. Gray (March 24): Adults of strawberry root weevils are out and feeding.

STRAWBERRY ROOT APHID (Aphis forbesi Weed)

Virginia. H. G. Walker (March 26): Examination of strawberry fields in Princess Anne County have shown that practically all of the overwintering strawberry root louse eggs have hatched.

BEETS

BEET LEAFHOPPER (Eutettix tenellus Bak.)

Utah. G. F. Knowlton (March 16): Beet leafhoppers survived the winter in considerable numbers on some Tooele and Box Elder County breeding areas. Males survived at Flux and Tremple, which is unusual for this area but probably due to the unusually mild winter.

Utah and Arizona. E. W. Davis, Monthly Letter Bur. Ent., No. 237 (February): On a trip through the perennial breeding area in Utah and Arizona I found host-plant conditions favorable for a heavy population of E. tenellus in 1934. Throughout the area alfilaria, an important host of the beet leafhopper, was growing thickly over most of the area below the 3,000-foot level. Counts showed approximately one leafhopper every 2½ feet. All females collected were full of mature eggs. In localities where alfilaria had not germinated, E. tenellus was collected on Covillea, another important host. In the Nevada area no Plantago or alfilaria was found to have germinated. Eriogonum was germinated in a very limited area. In this area only one specimen, a female, was taken on Covillea.

F O R E S T A N D S H A D E T R E E I N S E C T S*

FALL CANKER WORM (Alsophila pometaria Harr.)

Connecticut. E. P. Felt (March 24): Eggs have survived the intense cold through December and January, apparently unhurt.

Kansas. H. R. Bryson (March 20): The first female was taken on January 1, and the first male was taken January 2, following the very mild November and December. The emergence continued until the peak was reached about January 17, when 143 females were taken on one tree. The last female was observed on February 20.

California. F. H. Wymore (March 21): The fall canker worm is fairly common in many orchards in Solano and Sonoma Counties.

SPRING CANKER WORM (Paleacrita vernata Peck)

Kansas. H. R. Bryson (March 20): The mild winter favored an early emergence. The first female was observed on January 11 and the first male was taken on January 16. The emergence continued until the peak was reached on

*Correction: The note in Insect Pest Survey Bulletin, March 1934, page 19 on brown-tail moth (Nygmia phaeorrhoea Don.) by H. G. Walker in Virginia should be H. L. Bailey in Vermont.

March 3, when 506 females were taken on one tree. The fact that the emergence continued over such a long period made it difficult to maintain sticky bands at Manhattan; hence, many of the females no doubt have escaped being caught. The emergence continues at this writing and is the heaviest for many years.

Missouri. L. Haseman (March 21: A spring canker worm male moth was observed flying late in February and again March 20 at Columbia.

WHITE-MARKED TUSSOCK MOTH (Hemerocampa leucostigma S. & A.)

Massachusetts. A. I. Bourne (March 28): Egg masses of the white-marked tussock moth from orchards at Amherst, where temperatures ranged as low as from -20 to -30° F., are hatching apparently normally.

FOREST TENT CATERPILLAR (Malacosoma disstria Hbn.)

Colorado. G. M. List (March 29): The forest tent caterpillar promises to be from moderately to quite abundant in a number of towns throughout northeastern Colorado. The eggs have not yet begun to hatch.

ASH

ASH BORER (Podosesia fraxini Lugger)

North Dakota. J. A. Munro (March 19): Specimens were received, March 16, from Haynes, Adams County. They were destroying ash trees.

BEECH

BEECH SCALE (Crytococcus fagi Baer.)

New England. Bureau of Entomology (March 2): The past season has seen tremendous increases in the known distribution of the beech scale in the New England States. It is followed by a Nectria disease which may or may not be the actual killing agent. It is present in Maine, New Hampshire, and Massachusetts, but thus far killing of the trees has been confined to Maine and the Maritime Provinces of Canada.

ELM

EUROPEAN ELM SCALE (Gossyparia spuria Mod.)

Illinois. W. P. Flint (March 20): Mr. P. A. Glenn reports that during February the European elm scale was found generally and well established in Lake, Cook, and DuPage Counties, the eastern tier of townships in Kane County, the entire City of Springfield and some adjacent woodlands, and in the western half of the City of Champaign.

California. M. L. Jones (March 16): Napa County reports the European elm scale as causing slight damage locally on a few Chinese elms, during February. Madera County reports the European elm scale as present during February.

CLOVER MITE (Bryobia praetiosa Koch)

New Hampshire. E. P. Felt (March 24): Eggs were extraordinarily abundant upon elms at Hanover, and apparently eggs and young mites have not been killed to any appreciable extent by the low temperatures.

PINE

EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana Schiff.)

Massachusetts. P. A. Berry, Monthly Letter Bur. Ent., No. 237 (February): One hundred larvae were removed from infested shoots of pine collected in each locality of Wakefield and Brookline, and were examined to ascertain if they were living or dead. In each collection only 1 of the 100 larvae examined was alive. It is presumed that the death of the larvae was due to the unusually low temperatures of the latter part of December. Two of the larvae from Wakefield and 7 from Brookline contained the immature stage of a parasite of the genus Orgilus, all dead. Adults of O. obscurator (Nees), a parasite received from Europe, had been liberated in each of the infestations from which the European pine shoot moth larvae were obtained and it was probably this species that was found in the parasitized larvae.

Connecticut. W. E. Britton (March 23): From 80 to 90 percent of the larvae in the shoots have been killed during the winter. Red, Scotch and mugho pines in south-central Connecticut are attacked.

PINE TUBE MOTH (Eulia pinatubana Kearf.)

New York. E. P. Felt (March 24): The pine tube moth has been reported as locally abundant at Locust Valley, L. I.

MOUNTAIN PINE BEETLE (Dendroctonus monticolae Hopk.)

Idaho. J. C. Evenden, Monthly Letter Bur. Ent., No. 237 (February): In 1927 a small outbreak was reported from the eastern portion of the Nezperce National Forest. This outbreak was apparently a chance infestation from the severe epidemic that existed in the lodgepole pine stands of the Bitterroot and Salmon Forests. Since that date the infestation has spread northward, devastating all lodgepole pine stands in its path. An analysis of the 1933 ranger reports shows that this epidemic has passed through the Nezperce and Selway Forests, and now rests in the Clearwater, with a few spots of infestation on the St. Joe Forest. Although it is accepted that the remaining lodgepole pine stands within these forests are doomed, the seriousness of the situation rests upon the possibility that the insect may transfer its attack to white pine after depleting the lodgepole pine stands. As these tree species are equally acceptable hosts of the insect, and as white pine in association with lodgepole is already being attacked on the Clearwater, there is but small hope that such an occurrence will not take place. There are large bodies of valuable western white pine on the Clearwater and St. Joe National Forests which at this time are seriously threatened.

WHITE PINE APHID (Lachnus strobi Fitch)

New York. E. P. Felt (March 24): The black eggs were sent in in numbers from pines at Locust Valley and also Westbury, L. I.

PINE NEEDLE SCALE (Chionaspis pinifoliae Fitch)

Massachusetts. A. I. Bourne (March 28): The species of scale which winter over in the egg stage, such as the pine leaf scale, from such observations as have been made at Amherst appear to have wintered very successfully.

New York. R. E. Horsey (March 25): The pine leaf scale was observed on an ornamental planting of Scotch and Austrian pines. Infestation was quite severe on the Scotch pine. The purplish eggs appear plump and healthy when removed from under the scales. The pine leaf scale is about eliminated from Highland Park.

Nebraska. M. H. Swenk (February 15 - March 15): A Hall County correspondent, during the first week in March, reported that her mugho pine showed an infestation by the pine leaf scale.

POPLAR

CALIFORNIA TENT CATERPILLAR (Malacosoma californica Pack.)

Arizona. C. D. Lebert (March 21): Very abundant on cottonwood trees around Phoenix. Webbing is noticeable on all roadways where cottonwoods are planted. Very annoying in homes in which the caterpillars gain access in their migrations.

WILLOW

WESTERN WILLOW TINGID (Corythucha salicata Gibson)

Oregon. B. G. Thompson (March 24): The western willow tingid is showing up in serious numbers in sections of the Willamette Valley.

INSECTS AFFECTING GREENHOUSE AND ORNAMENTAL PLANTS

TWO-MARKED TREE HOPPER (Enchenopa binotata Say)

New York. E. P. Felt (March 24): Egg masses were found somewhat abundant upon Celastrus or Roxbury waxwort at Westbury, L. I.

MEALYBUGS (Pseudococcus spp.)

North Dakota. J. A. Munro (March 19): A report of serious injury to house plants was received from Sheyenne, Eddy County, March 16.

Nebraska. M. H. Swenk (February 15 - March 15): Complaints continued to be received during the period here covered of infestation of house plants with the mealy bug P. citri Risso.

Mississippi. D. W. Grimes (March 20): Common mealybugs (P. citri) are abundant on Euonymus japonica at Kosciusko.

SOFT SCALE (Coccus hesperidum L.)

Nebraska. M. H. Swenk (March 15): From Dundy County, during the first week in March, we received a complaint from a correspondent that ther indoor lemon plant was being destroyed by the soft brown scale, and the following week a Hayes County correspondent reported serious injury to her begonia plants by this pest.

A COCCID (Lepidosaphes tuberculata Malen.)

Florida. E. W. Berger & G. B. Merrill (March 20): L. tuberculata is moderately abundant on orchids in a greenhouse at West Palm Beach. Previously reported from Coconut Grove. Specimens collected.

ARBORVITAE

ARBORVITAE APHID (Dilachnus thujafilina Del G.)

Mississippi. C. Lyle assistants (March 19): Arborvitae is being heavily infested at Laurel. The aphid was found to be very abundant on arborvitae in Smith County, near Pineville School, on February 23.

Louisiana. W. E. Hinds (March 26): An aphid common on arborvitae has attracted blowflies to the honeydew excretions as a source of food at Tallulah and Baton Rouge.

AZALEA

AZALEA LEAF MINER (Gracilaria azaleae Brants)

Mississippi. C. Lyle (February 24): Mr. J. P. Kislanko sent us some adults, larvae, and pupae taken from azalea in a greenhouse at Hattiesburg, on February 21. These insects were abundant in the greenhouse; and the azalea plants appeared shabby owing to defoliation. (Det. by A. Busck)

EUONYMUS

EUONYMOUS SCALE (Chionaspis euonymi Comst.)

Connecticut. W. E. Britton (March 23): Evidence of heavy winter mortality of C. euonymi Comst.

New York. R. E. Horsey (March 25): The Euonymus scale is quite prevalent in Rochester on Euonymus radicans and its varieties as well as on some deciduous species of Euonymus. The severe winter has badly injured leaves on exposed plants of E. radicans, and eggs examined are apparently yellowed and wrinkled although a few apparently live ones were found.

Unfortunately I cannot tell whether the condition was caused by the unusually cold winter or by spraying, as these were treated several times last summer and late in the year.

Mississippi. J. Milton (March 19): The Euonymus scale is very abundant on Euonymus in Jackson.

GLADIOLUS

GLADIOLUS THRIPS (Taeniothrips gladioli M. & S.)

Florida. J. R. Watson (March 20): The "glad" thrips caused much damage to plantations in Lee County and about Sanford and to a lesser extent about Winter Haven, Polk County.

LATANIA SCALE (Aspidiotus lataniae Sign.)

California. S. Lockwood (March 24): Dr. Dean Palmer, San Diego County, found the latania scale living on gladiolus corms 4 inches below the surface of the soil.

LILAC

OYSTER-SHELL SCALE (Lepidosaphes ulmi L.)

New York. R. E. Horsey (March 25): The oyster-shell scale is found on ornamental lilacs and on white ash in native woods. Microscopic examination shows that the eggs are plump and whitish and apparently will hatch abundantly. This scale is almost eliminated from Highland Park.

MAGNOLIA

TULIP TREE SCALE (Toumeyella liriodendri Gmel.)

Mississippi. C. Lyle (March 22): Magnolia twigs heavily infested were received from Mount Olive, Covington County, on March 7.

NARCISSUS

A BULB THRIPS (Liothrips vaneeckei Priessner)

Washington. R. Schopp (February 26): The first eggs known to have been laid in the field this season were found February 26 at Sumner. No pupae have been found this season. Large numbers of parasitic mites have been appearing in the cultures in the laboratory during the winter and spring.

NARCISSUS BULB FLY (Merodon equestris Fab.)

Washington. C. H. Martin (February): On February 16 larvae were out of the bulbs and at the surface of the soil in an outdoor cage at Sumner. The larvae in this cage had been removed and replaced in bulbs during November, December, and January. On February 17 several pupae were found

over a lot of undisturbed larvae. Examination of larvae in the second spring of their existence showed them to be in good condition in spite of the fact that they had been under flood waters and also in water-saturated soil for several weeks. Twenty five, 15, and 16 mm larvae were removed from bulbs last August and placed in soil. Six of these larvae were still alive on February 15; apparently the rest had died.

PALM

PALMETTO SCALE (Comstockiella sabalis Comst.)

Florida. E. W. Berger & G. B. Merrill (March 20): The palmetto scale is moderately abundant. Occasionally present on cabbage palmetto and some other palms, wherever grown.

PALM LEAF SKELETONIZER (Homaledra sabalella Chamb.)

Florida. E. W. Berger & G. B. Merrill (March 20): The palm leaf skeletonizer is moderately abundant. Frequently present on cabbage palmetto and some other palms wherever grown.

RHODODENDRON

A WHITEFLY (Aleyrodes pruinosus Bemis)

Washington. M. H. Hatch (February 15): A white fly is attacking cultivated rhododendron at Seattle. Individuals are not very abundant. (Det. P. W. Mason)

ROSE

SMALL GREEN ROSE APHID (Myzaphis rosarum Walk.)

California. M. L. Jones (March 16): Napa County reports the small green rose aphid as having caused medium damage generally to roses during February.

I N S E C T S A T T A C K I N G M A N A N D D O M E S T I C A N I M A L S

MAN

MOSQUITOES (Culicinae)

Utah. G. F. Knowlton (March 17): Mosquito larvae are nearly mature in some localities and a few adults, principally Anopheles, have been collected during the past two weeks.

FLEAS (Ctenocephalides spp.)

Missouri. L. Haseman (March 21): Farmers from different parts of the State are complaining of early flea activity.

Nebraska. M. H. Swenk (March 15): Complaints of infestation with fleas, presumably C. canis Curt, were received from Buffalo, Cuming, and Richardson Counties during the last half of February, as a continuation of the complaints received in mid-February.

BOXELDER BUG (Leptocoris trivittatus Say)

South Carolina. F. Sherman (March 19): Boxelder bugs were reported active March 9 in the central part of the State, invading a house.

North Dakota. J. A. Munro (March 19): An unusual number of reports have been received on the prevalence of boxelder bugs during the past season. Throughout the winter months reports indicated that they were regarded chiefly as a household pest.

California. F. H. Wymore (March 21): The boxelder bug has been quite active during the past month in the Vacaville and Fairfield districts of Solano County. No damage from feeding has been reported.

CATTLE

CATTLE GRUBS (Hypoderma spp.)

North Dakota. J. A. Munro (March 17): I have received from F. D. Butcher a note dated today on cattle grub infestation at Orrin. He states that the grubs are nearly ready to drop out.

Missouri. L. Haseman (March 21): Ox warbles have been much less abundant than usual at Columbia; some are still in the backs of hosts.

HORSES

HORSE BOTFLIES (Gastrophilus spp.)

North Dakota. J. A. Munro (March 21): Horse bots have attracted considerable attention during the winter and early spring months in the northern and eastern parts of the State. (Abstract, J. A. H.)

Missouri. L. Haseman (March 21): Horse bots are about normal as regards abundance locally (Columbia).

A TICK (Dermacentor sp.)

North Dakota. J. A. Munro (March 19): A veterinarian sent numerous specimens of ticks, Dermacentor sp. (both sexes) with an accompanying note as follows: "The ticks were taken from horses about 18 miles south of Cartwright, McKenzie County, and the horses are 10 miles from the closest timber. They are causing considerable trouble among horses for a distance of 50 miles up the Little Missouri River from Chaloner bridge, south of Watford City.

POULTRY

BEDBUGS (Cimex lectularius L.)

Ohio. N. F. Howard (March 28): A severe infestation of bedbugs in chicken coops at South Point was recently brought to our attention. The insects became so numerous that it was necessary to remove the chickens and completely sterilize the house. In one instance the bugs were so numerous that the farmer had to dispose of all his chickens but a few which he isolated and treated by hand. The identity of the species has not been verified by a specialist. I understand that there was a heavy infestation in the small-animal house where experimental rats and other small animals are kept at Ohio State University.

H O U S E H O L D A N D S T O R E D - P R O D U C T S I N S E C T S

TERMITES (Reticulitermes spp.)

Connecticut. M. P. Zappe (March 23): Termites are becoming more destructive to buildings. R. flavipes Koll. was reported attacking buildings at New Haven and Westport. Several years ago this was rather rare but during the last 3 years we have many reports of injury by this pest to homes and public buildings. On Prospect Street, New Haven, many new expensive homes are infested. Several years ago this land was covered with wood but has recently been developed into building sites.

West Virginia. L. M. Peairs (March 24): Termites reported at Morgantown, Fairmont, and Parkersburg. No less than 11 reports of adult emergence during week of March 10 - 17.

Mississippi. C. Lyle (March 22): Requests for information about controlling termites have been received during the past few weeks from alsmot all sections of the State.

Kansas. H. R. Bryson (March 20): Owing to the mild winter, termite activity continued throughout the winter months. Many new local infestations have been found. Apparently four species of subterranean termites are present in Kansas.

Utah. G. F. Knowlton (February 28): Termites (R. tumicepa Bks.) are seriously damaging electric light poles in various parts of the Cache Valley, untreated lodgepole and other native pine poles being damaged most severely. Company representatives report that untreated poles are sometimes severely mined and destroyed within three years. (Det. T. E. Snyder)

California. F. H. Wymore (March 21): The western or subterranean termite, R. hesperus Bks. has been actively preparing the emergence tubes in buildings and greenhouses during the past two weeks for the spring flight; however, no swarming has been observed or reported as yet.

EUROPEAN EARWIG (Forficula auricularia L.)

California. A. E. Michelbacher (March 21): As late as February 24 eggs could be found at Berkeley without any difficulty.

INDIAN-MEAL MOTH (Plodia interpunctella Hbn.)

Nebraska. M. H. Swenk (March 15): From Stanton County comes the report of large numbers of Indian-meal moths emerging from poorly shelled corn cobs stored in the cellar of a house during the first week in March.

BEAN WEEVIL (Acanthoscelides obtectus Say)

Mississippi. C. Lyle (March 22): Shelled butterbeans showing severe injury were received from Durant, Holmes County, on March 8.

PEA WEEVIL (Bruchus pisorum L.)

Idaho. T. A. Brindley, Monthly Letter Bur. Ent., No. 237 (February): Prospects are favorable for a decided increase in pea weevil damage this season. If the weather continues mild the only redeeming feature of the situation will be the small hibernating population. An interesting result of the continued mild weather is the survival of volunteer peas in the winter wheat. Last fall during the harvest season unusual quantities of peas were shattered because of climatic conditions. Whole fields seeded to winter wheat resembled pea fields, so great was the quantity shattered. Favorable climatic conditions allowed practically all of these peas to germinate and, thus far, these peas have survived. It is possible, should the warm weather continue, that these peas will survive and absorb some of the weevil damage. This would alleviate the situation this crop season, but would breed large pea weevil populations for 1935.

A SPIDER BEETLE (Ptinus tectus Boieldieu)

Washington. M. H. Hatch (February 23): This beetle is numerous in a grain store at Edmonds.

A NOTE FROM HAITI - By G. N. Wolcott

COTTON LEAF WORM (Alabama argillacea Hbn.)

March 8, 1934: I have just received word from Mr. Andre Audant of Port-au-Prince, Haiti, that he has been observing successive generations of Alabama argillacea Hbn. there on cotton this winter, the pupal periods coming the latter part of January and the latter part of February. He does not note what the temperatures have been, but these will be obtainable later. By contrast, no Alabama at all has been noted in Puerto Rico for over a year, the last small outbreak having been eliminated in January 1933 on a small field of an experimental planting at Rio Piedras. It occurs to me that the presence of A. argillacea in Haiti throughout the winter may indicate the possibility of an early occurrence in Florida and Georgia next spring.